

(13) Metallurgical design temperature range, in °C or °F.

(c) *Additional information.* The following additional information must appear on the metal identification plate when applicable:

- (1) Lining material.
- (2) Heating coil MAWP in bar and psig.

(3) Corrosion allowance, in mm or in.

(d) In addition to the markings required above, each tank used in international transport must have a Safety Approval Plate containing the information required in §§ 451.21 through 451.25 of this title.

(e) Nothing in this section shall be deemed to preclude the display of other pertinent information on the required metal identification plate.

[Amdt. 178-65, 46 FR 9899, Jan. 29, 1981, as amended at 62 FR 51561, Oct. 1, 1997; 66 FR 45387, Aug. 28, 2001]

#### **§ 178.271 Specification IM 101 steel portable tanks.**

##### **§ 178.271-1 General requirements.**

(a) Specification IM 101 portable tanks must conform to the general design and construction requirements in § 178.270 of this subpart in addition to the specific design requirements contained in this section.

(b) The MAWP of each tank shall be equal to or greater than 1.75 bar (25.4 psig) and less than 6.8 bar (100 psig).

(c) Each tank shall be designed and constructed in accordance with the requirements of Section VIII, Division 1, of the ASME Code except as limited or modified in this section or in § 178.270 of this subpart. ASME certification or stamp is not required.

[Amdt. 178-65, 46 FR 9899, Jan. 29, 1981, as amended by Amdt. 178-104, 59 FR 49135, Sept. 26, 1994; 66 FR 45387, Aug. 28, 2001]

#### **§ 178.272 Specification IM 102 steel portable tanks.**

##### **§ 178.272-1 General requirements.**

(a) Specification IM 102 portable tanks must conform to the general design and construction requirements in § 178.270 of this subpart in addition to the specific design requirements contained in this section.

(b) The MAWP of each tank shall be less than 1.75 bar (25.4 psig) but at least 1.0 bar (14.5 psig).

(c) Each tank shall be designed and constructed in accordance with the requirements of Section VIII, Division 1, of the ASME Code except as limited or modified in this section or in § 178.270 of this subpart. ASME certification or stamp is not required.

[Amdt. 178-65, 46 FR 9899, Jan. 29, 1981, as amended by Amdt. 178-104, 59 FR 49135, Sept. 26, 1994; 66 FR 45387, Aug. 28, 2001]

#### **§ 178.272-2 Minimum thickness of shells and heads.**

(a) The approval agency may authorize a minimum thickness less than that required by § 178.270-5 of this subpart where additional protection against tank puncture provides equal integrity.

(b) The shell and head thickness of a tank must be at least:

(1) 3.18 mm (0.125 inches) for a tank with a maximum cross-sectional dimension of 1.8 m (5.9 feet) or less; or

(2) 4 mm (0.157 inches) for a tank constructed of the reference mild steel having a maximum cross-sectional dimension exceeding 1.8 m (5.9 feet). For tanks having a maximum cross-sectional dimension exceeding 1.8 m (5.9 feet) constructed of other steels, an equivalent head and shell thickness calculated in accordance with § 178.270-5(c) of this subpart may be used, subject to an absolute minimum of 3.18 mm (0.125 inches).

(c) The following additional puncture protection systems are authorized:

(1) An overall external structural protection, such as a jacket, which is rigidly secured to the tank with a layer of cushioning material installed between the external structural protection and the tank; or

(2) A complete framework surrounding the tank including both longitudinal and transverse structural members.

[Amdt. 178-65, 46 FR 9899, Jan. 29, 1981, as amended at 66 FR 45387, Aug. 28, 2001]

#### **§ 178.273 Approval of Specification IM portable tanks and UN portable tanks.**

(a) *Application for approval.* (1) An owner or manufacturer of a portable

tank shall apply for approval to a designated approval agency authorized to approve the portable tank in accordance with the procedures in subpart E, part 107 of this subchapter.

(2) Each application for approval must contain the following information:

(i) Two complete copies of all engineering drawings, calculations, and test data necessary to ensure that the design meets the relevant specification.

(ii) The manufacturer's serial number that will be assigned to each portable tank.

(iii) A statement as to whether the design type has been examined by any approval agency previously and judged unacceptable. Affirmative statements must be documented with the name of the approval agency, reason for non-acceptance, and the nature of modifications made to the design type.

(b) *Action by approval agency.* The approval agency must perform the following activities:

(1) Review the application for approval to determine whether it is complete and conforms with the requirements of paragraph (a) of this section. If an application is incomplete, it will be returned to the applicant with an explanation as to why the application is incomplete.

(2) Review all drawings and calculations to ensure that the design is in compliance with all requirements of the relevant specification. If the application is approved, one set of the approved drawings, calculations, and test data shall be returned to the applicant. The second (inspector's copy) set of approved drawings, calculations, and test data shall be retained by the approval agency. Maintain drawings and approval records for as long as the portable tank remains in service. The drawings and records must be provided to the Department of Transportation (DOT) upon request.

(3) Witness all tests required for the approval of the portable tank specified in this section and part 180, subpart G of this subchapter.

(4) Ensure, through appropriate inspection that each portable tank is fabricated in all respects in conformance

with the approved drawings, calculations, and test data.

(5) Determine and ensure that the portable tank is suitable for its intended use and that it conforms to the requirements of this subchapter.

(6) For UN portable tanks intended for non-refrigerated and refrigerated liquefied gases and Division 6.1 liquids which meet the inhalation toxicity criteria (Zone A or B) as defined in § 173.132 of this subchapter, or that are designated as toxic by inhalation materials in the § 172.101 Table of this subchapter, the approval agency must ensure that:

(i) The portable tank has been constructed in accordance with the ASME Code, Section VIII, Division 1 (see § 171.7 of this subchapter). ASME Code, Section VIII, Division 2 (see § 171.7 of this subchapter) or other design codes may be used if approved by the Associate Administrator (see § 178.274(b)(1));

(ii) All applicable provisions of the design and construction have been met to the satisfaction of the designated approval agency in accordance with the rules established in the ASME Code and that the portable tank meets the requirements of the ASME Code and all the applicable requirements specified in this subchapter;

(iii) The inspector has carried out all the inspections specified by the rules established in the ASME Code; and

(iv) The portable tank is marked with a U stamp code symbol under the authority of the authorized independent inspector.

(7) Upon successful completion of all requirements of this subpart, the approval agency must:

(i) Apply its name, identifying mark or identifying number, and the date upon which the approval was issued, to the metal identification marking plate attached to the portable tank. Any approvals for UN portable tanks authorizing design or construction alternatives (Alternate Arrangements) approved by the Associate Administrator (see § 178.274(a)(2)) must be indicated on the plate as specified in § 178.274(i).

(ii) Issue an approval certificate for each portable tank or, in the case of a series of identical portable tanks manufactured to a single design type, for

each series of portable tanks. The approval certificate must include all the information required to be displayed on the required metal identification plate required by § 178.270–14 of this subchapter for IM portable tanks, § 178.245–6 for Specification 51 steel portable tanks, or § 178.274(i) for UN portable tanks. The approval certificate must certify that the approval agency designated to approve the portable tank has approved the portable tank in accordance with the procedures in subpart E of part 107 of this subchapter and that the portable tank is suitable for its intended purpose and meets the requirements of this subchapter. When a series of portable tanks is manufactured without change in the design type, the certificate may be valid for the entire series of portable tanks representing a single design type. For UN portable tanks, the certificate must refer to the prototype test report, the hazardous material or group of hazardous materials allowed to be transported, the materials of construction of the shell and lining (when applicable) and an approval number. The approval number must consist of the distinguishing sign or mark of the country (“USA” for the United States of America) where the approval was granted and a registration number.

(iii) Retain a copy of each approval certificate.

(8) For UN portable tanks, the approval certificate must also include the following:

(i) The results of the applicable framework and rail impact test specified in part 180, subpart G, of this subchapter; and

(ii) The results of the initial inspection and test in § 178.274(j).

(9) The approval agency shall be independent from the manufacturer. The approval agency and the authorized inspector may be the same entity.

(c) *Manufacturers’ responsibilities.* The manufacturer is responsible for compliance with the applicable specifications for the design and construction of portable tanks. In addition to responsibility for compliance, manufacturers are responsible for ensuring that the contracted approval agency and authorized inspector, if applicable, are qualified, reputable and competent.

The manufacturer of a portable tank shall—

(1) Comply with all the applicable requirements of the ASME Code (see § 171.7 of this subchapter) and of this subpart including, but not limited to, ensuring that the quality control, design calculations and required tests are performed and that all aspects of the portable tank meet the applicable requirements.

(2) Obtain and use a designated approval agency, if applicable, and obtain and use a DOT-designated approval agency to approve the design, construction and certification of the portable tank.

(3) Provide a statement in the manufacturers’ data report certifying that each portable tank that is manufactured complies with the relevant specification and all the applicable requirements of this subchapter.

(4) Maintain records of the qualification of portable tanks for at least 5 years and provide copies to the approval agency, the owner or lessee of the tank. Upon request, provide these records to a representative of DOT.

(d) *Denial of application for approval.* If an approval agency finds that a portable tank cannot be approved for any reason, it shall notify the applicant in writing and shall provide the applicant with the reasons for which the approval is denied. A copy of the notification letter shall be provided to the Associate Administrator. An applicant aggrieved by a decision of an approval agency may appeal the decision in writing, within 90 days of receipt, to the Associate Administrator.

(e) *Modifications to approved portable tanks.* (1) Prior to modification of any approved portable tank which may affect conformance and the safe use of an IM or UN portable tank, which may involve a change to the design type or which may affect its ability to retain the hazardous material in transportation, the person desiring to make such modification shall inform the approval agency that issued the initial approval of the portable tank (or if unavailable another approval agency) of the nature of the modification and request approval of the modification. The person desiring to modify the tank must supply the approval agency with

## § 178.274

## 49 CFR Ch. I (10–1–02 Edition)

three sets of all revised drawings, calculations, and test data relative to the intended modification.

(2) A statement as to whether the intended modification has been examined and determined to be unacceptable by any approval agency. The written statement must include the name of the approving agency, the reason for nonacceptance, and the nature of changes made to the modification since its original rejection.

(3) The approval agency shall review the request for modification, and if it is determined that the proposed modification is in full compliance with the relevant DOT specification, including a UN portable tank, the request shall be approved and the approval agency shall perform the following activities:

(i) Return one set of the approved revised drawings, calculations, and test data to the applicant. The second and third sets of the approved revised drawings, calculations, and data shall be retained by the approval agency as required in §107.404(a)(3) of this subchapter.

(ii) Ensure through appropriate inspection that all modifications conform to the revised drawings, calculations, and test data.

(iii) Determine the extent to which retesting of the modified tank is necessary based on the nature of the proposed modification, and ensure that all required retests are satisfactorily performed.

(iv) If modification to an approved tank alters any information on the approval certificate, issue a new approval certificate for the modified tank and ensure that any necessary changes are made to the metal identification plate. A copy of each newly issued approval certificate shall be retained by the approval agency and by the owner of each portable tank.

(4) If the approval agency determines that the proposed modification is not in compliance with the relevant DOT specification, the approval agency shall deny the request in accordance with paragraph (d) of this section.

(f) *Termination of Approval Certificate.* (1) The Associate Administrator may terminate an approval issued under this section if he determines that—

(i) Information upon which the approval was based is fraudulent or substantially erroneous; or

(ii) Termination of the approval is necessary to adequately protect against risks to life and property; or

(iii) The approval was not issued by the approval agency in good faith; or

(iv) The portable tank does not meet the specification.

(2) Before an approval is terminated, the Associate Administrator gives the interested party(ies):

(i) Written notice of the facts or conduct believed to warrant the termination;

(ii) Opportunity to submit oral and written evidence; and

(iii) Opportunity to demonstrate or achieve compliance with the applicable requirements.

(3) If the Associate Administrator determines that a certificate of approval must be terminated to preclude a significant and imminent adverse affect on public safety, he may terminate the certificate immediately. In such circumstances, the opportunities of paragraphs (f)(2) (ii) and (iii) of this section need not be provided prior to termination of the approval, but shall be provided as soon as practicable thereafter.

[66 FR 33439, June 21, 2001, as amended at 67 FR 61016, Sept. 27, 2002]

### § 178.274 Specifications for UN portable tanks.

(a) *General.* (1) Each UN portable tank must meet the requirements of this section. In addition to the requirements of this section, requirements specific to UN portable tanks used for liquid and solid hazardous materials, non-refrigerated liquefied gases and refrigerated liquefied gases are provided in §§178.275, 178.276 and 178.277, respectively. Requirements for approval, maintenance, inspection, testing and use are provided in §178.273 and part 180, subpart G, of this subchapter. Any portable tank which meets the definition of a “container” within the terms of the International Convention for Safe Containers (CSC) must meet the requirements of the CSC as amended and 49 CFR parts 450 through 453 and must have a CSC safety approval plate.